

31.B TREE CLIMBING

31.B.01 Equipment.

- a. Climber spurs shall be of the tree-climbing type and shall have gaffs of the type and length suitable for the tree being climbed.
- b. Climbing ropes shall have a minimum diameter of 1.25 cm (0.5 in) and be constructed of a synthetic fiber, with a minimum nominal breaking strength of 2450 kg (5400 lb) when new: maximum working elongation (elasticity) shall not exceed 7% at a load of 245 kg (540 lb) (10% maximum breaking strength).
- c. Polypropylene or other synthetic ropes having similar low melting points shall not be used as climbing ropes.

31.B.02 A tree worker shall be tied in with an approved type of climbing rope and safety saddle when working above the ground: this does not necessarily apply to a worker ascending into a tree; work may be performed while standing on a self-supporting ladder but only when the worker is tied in as required.

31.B.03 During climbing operations, tree limbs should be inspected before weight is applied to them.

31.B.04 A 16 mm (5/8 in) metal shackle shall be secured to the end of a support line that meets minimum standards for a climbing line. The support line shall be tied to the pin of the shackle with the climbing line placed through the shackle; the support line shall be tied off at the base of the tree or any other acceptable anchor.

31.B.05 The climbing line shall be crotched as soon as practicable after the employee is aloft, and a taut-line hitch tied and checked.

31.B.06 The worker shall be completely secured with the climbing line before starting the operation. The worker shall remain tied in until the work is completed and he/she has returned to the ground; if it is necessary to recrotch the rope in the tree, the worker shall re-tie in or use the safety strap before releasing the previous tie.

31.B.07 Tree workers shall not carry tools in their hands while climbing: tools shall be raised and lowered one at a time by means of a line, except when working from an aerial-lift device or during topping or removing operations.

TABLE 7-1
MINIMUM LIGHTING REQUIREMENTS

Facility or function	Illuminance - lx (lm/ft ²)
Accessways - general indoor - general outdoor - exitways, walkways, ladders, stairs	55 (5) 33 (3) 110 (10)
Administrative areas (offices, drafting and meeting rooms, etc.)	540 (50)
Chemical laboratories	540 (50)
Construction areas - general indoor - general outdoor - tunnels and general underground work areas (minimum 110 lux required at tunnel and shaft heading during drilling, mucking, and scaling)	55 (5) 33 (3) 55 (5)
Conveyor routes	110 (10)
Docks and loading platforms	33 (3)
Elevators, freight and passenger	215 (20)
First aid stations and infirmaries	325 (30)
Maintenance/operating areas/shops - vehicle maintenance shop - carpentry shop - outdoors field maintenance area - refueling area, outdoors - shops, fine detail work - shops, medium detail work - welding shop	325 (30) 110 (10) 55 (5) 55 (5) 540 (50) 325 (30) 325 (30)
Mechanical/electrical equipment rooms	110 (10)
Parking areas	33 (3)
Toilets, wash, and dressing rooms	110 (10)
Visitor areas	215 (20)
Warehouses and storage rooms/areas - indoor stockroom, active/bulk storage - indoor stockroom, inactive - indoor rack storage - outdoor storage	110 (10) 55 (5) 270 (25) 33 (3)
Work areas - general (not listed above)	325 (30)

ACCIDENT PREVENTION SIGN REQUIREMENTS

TYPE	PURPOSE	DESIGN
DANGER	Indicates a specific immediate and grave danger; a hazard capable of producing irreversible damage or injury, and prohibitions against harmful activity	Layout as shown in Fig 8-1. Shall have the word "DANGER" in white within a red oval outlines in white on a black rectangular background in the upper panel and a lower panel for additional wording or symbols in black or red on white for additional wording or symbols in black or red on a white background
CAUTION	Call attention to a specific potential hazard or a hazard capable of resulting in severe but not irreversible, injury or damage.	Layout as shown in Fig 8-1. Shall have the word "CAUTION" in yellow on a black background and a lower panel for additional sign wording in black on a yellow background
GENERAL SAFETY	Includes notices of general practice and rules relating to health, first aid, medical equipment, sanitation, housekeeping, and general safety	Layout as shown in Fig 8-1 or consisting of a single panel. Shall have the appropriate keyword as the signal word in white on a green background in the upper panel and a lower panel for additional sign wording or symbols in black or green on a white background. Alternatively, the entire sign may be white letters on a green background.
FIRE AND EMERGENCY	Used only to label or point the way to fire extinguishing equipment, fire escapes and exits, gas shutoff valves, sprinkler drains, and emergency procedures	Layout as shown in Fig 8-1 or consisting of a single red panel. Shall have the appropriate keyword as the signal word in white on a red background in the upper panel and a lower panel for additional sign wording or symbols in red on a white background. Alternatively, the entire sign may be white letters on a red background
INFORMATION	Provide information of a general nature, such as designation of facilities or services, in order to avoid confusion or misunderstanding	Layout as shown in Fig 8-1 or consisting of a single panel. Should have the signal word "NOTICE" in white on a blue background in the upper panel and a lower panel for additional wording or symbols in blue or black on a white background. Alternatively, the entire sign may be in white letters on a blue background
EXIT	Used to indicate exits	Letterred in legible letters, not less than 15 cm (6 in) high, on a white field. The principal stroke of the letters shall be at least 2 cm (3/4 in) in width

FIGURE 8-1**ACCIDENT PREVENTION SIGNS**

F1 [Diagram showing a sign panel with dimensions: a (width) and b (height). The panel is divided into an **UPPER PANEL** and a **LOWER PANEL**. An optional **SYMBOL PANEL** is shown to the right of the lower panel. Dimension c is the width of the symbol panel, and dimension d is the height of the symbol panel.]

		Minimum Lettering Requirements	
		Height of Letter (In.)	Viewing Distance (ft.)
a	OPTIONAL SYMBOL PANEL	5	200 - 250
b	UPPER PANEL	4 1/2	150 - 200
c	LOWER PANEL	4	120 - 150
d	ON SIGN	3 1/2	105 - 120
		3	90 - 105
-	2:1 < a:b < 5:1	2 1/2	75 - 90
-	b > c	2	60 - 75
-	c < 20	1 1/2	40 - 60
-	If optional panel is used.	1	30 - 40
-	- d = e = b + c	3/4	20 - 30
-	- panel is placed to the right	1/2	10 - 20
		3/4	- 10

ACCIDENT PREVENTION TAGS

<u>Keyword/Phrase</u>	<u>Keyword/Phrase Print Color</u>	<u>Background Color</u>	<u>Tag Color</u>
"DANGER"	White in red oval	Black	White
"CAUTION"	Yellow	Black	Yellow
"DO NOT OPERATE"	White	Black	White
"OUT OF ORDER"	,	Red	
"DO NOT USE"	White	Black	White
Informational message or inspection	Black or green	N/A	Green or white White or black

